

Abstract of the Disclosure:

A mask having at least one pair of mutually parallel slit structures, separated from one another by a distance in an opaque layer, is introduced into a mask mount. The mask side having the layer is turned to the illumination source. During mask exposure, a far field interference pattern is produced on the opposite rear side of the mask through the slit structures and projected into the substrate plane through a lens system of the exposure apparatus. The interference pattern is recorded as an image signal through exposure of a photosensitive layer of a wafer or by sensors on a movable substrate holder. Through determination of the contrast and subsequent Fourier transformation thereof as a function of distance between slits, the light distribution of the illumination can be derived. An advantageous mask has a multiplicity of slit structure pairs disposed with different angles with respect to a preferred direction and different distances in matrix form thereon.

GLM/nt